

# **GWALIA (U.S.A.) LTD.**



Barite Hill Project  
P.O. Box 1510  
McCormick, SC 29835  
Telephone: (803) 465-3313  
Facsimile: (803) 465-3208

May 3, 1991

**RECEIVED**

**MAY 6 1991**

**WATER QUALITY ASSESSMENT  
AND ENFORCEMENT DIVISION**

Enforcement Section  
SC Department of Health and  
Environmental Control  
2600 Bull Street  
Columbia, SC 29201

**RE: BARITE HILL MONITOR WELL QUARTERLY SAMPLES**

To Whom It May Concern;

Attached are the results of the quarterly samples taken from Barite Hill's monitor wells as required in Construction Permit #16225. These samples were taken on March 27, 1991 and delivered to Davis & Floyd Laboratories in Greenwood, SC on March 28.

If you have any questions or need any further information please contact me.

Sincerely,

Dan Ruminski  
Mine Manager

DR/baw

Enclosure

cc. Cathy Montgomery, SCDHEC  
Craig Kennedy, LRCC

**Davis & Floyd, Inc.**

Laboratory Analysis Report

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Work Order # 91-03-165

Received: 03/28/91

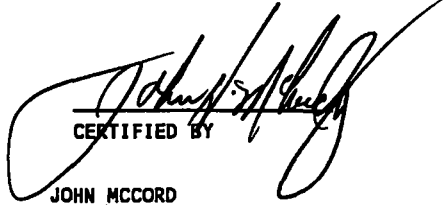
04/26/91 11:13:34

REPORT GWALIA USA LIMITED  
TO P.O. BOX 1510  
McCORMICK, S. C. 29835

PREPARED Davis & Floyd, Inc.  
BY P.O. Drawer 428  
Greenwood, S.C. 29648

ATTEN SCOTT WILKINSON

PHONE (803)-229\_5211

  
CERTIFIED BY  
JOHN MCCORD

WORK ID JOB.# 7561.00

**Comments:**

P.O. #

WE ARE PLEASED TO PROVIDE THIS CERTIFIED REPORT OF ANALYSES.

TAKEN GWALIA

FEEL FREE TO TELEPHONE IF FURTHER EXPLANATION IS REQUIRED.

TYPE GROUNDWATER

UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE, SAMPLES WILL BE

NUMBER OF SAMPLES 5

DISPOSED OF OR RETURNED 28 DAYS FROM THE DATE OF THIS REPORT.

**SAMPLE IDENTIFICATION**

01 GW-1

**DATE COLLECTED**

03/27/91

02 GW-2

03/27/91

03 GW-3

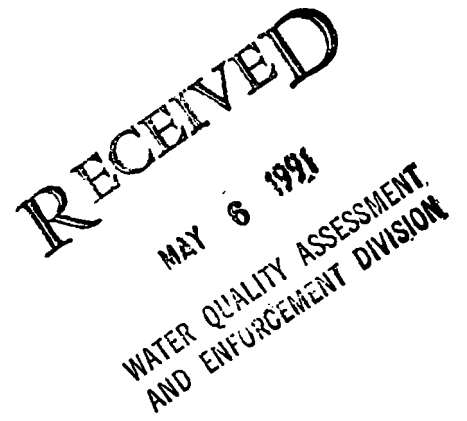
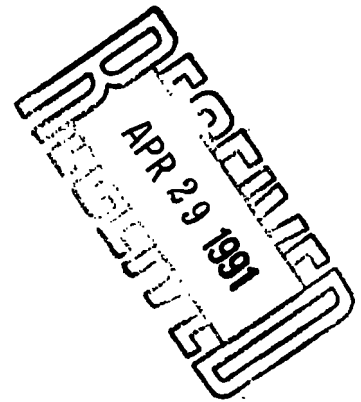
03/27/91

04 GW-5

03/27/91

05 GW-6

03/27/91



Received: 03/28/91

04/26/91 11:13:34

Test Description	Units	01	02	03	04
		GW-1	GW-2	GW-3	GW-5
SILVER (TOTAL)	mg/l	<0.01	<0.01	<0.01	<0.01
ALUMINUM (TOTAL)	mg/l	18.4	144	11.4	6.8
BARIUM (TOTAL)	mg/l	0.28	1.80	0.08	<0.02
CALCIUM (TOTAL)	mg/l	19.2	3.2	34.1	13.0
CADMIUM (TOTAL)	mg/l	0.080	0.012	<0.002	<0.002
CHROMIUM (TOTAL)	mg/l	0.06	0.07	0.03	<0.01
COPPER (TOTAL)	mg/l	0.53	0.80	0.03	0.02
IRON (TOTAL)	mg/l	48.4	290	16.1	8.64
POTASSIUM (TOTAL)	mg/l	6	17	<2	<2
MAGNESIUM (TOTAL)	mg/l	17.6	86.7	25.2	15.9
MANGANESE (TOTAL)	mg/l	0.70	3.57	1.01	0.61
SODIUM (TOTAL)	mg/l	15	5	30	8
NICKEL (TOTAL)	mg/l	0.08	0.06	0.02	<0.02
ZINC (TOTAL)	mg/l	2.19	0.58	0.08	0.12
MERCURY (TOTAL)	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
ARSENIC (TOTAL)	mg/l	0.024	0.015	<0.005	<0.005
LEAD (TOTAL)	mg/l	0.320	0.220	0.007	0.005
SELENIUM (TOTAL)	mg/l	<0.005	<0.05 X	<0.05 X	<0.005
TOTAL ORGANIC CARBON	mg/l	4	3	3	2
BICARBONATE ALKALINITY	mg/l	7.35	28.35	168	65.1
CHLORIDE	mg/l	4	3	43	4
pH (LAB)	pH units	5.2	6.0	6.9	6.7
SULFATE	mg/l	100	<300	8	22
SPECIFIC CONDUCTANCE	micromhos/cm	285	100	400	180
TEMPERATURE	Degrees C	22	22	22	23

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Continued From Above

Test Description	Units	01	02	03	04
		GW-1	GW-2	GW-3	GW-5
AMMONIA NITROGEN	mg/l	0.2	0.43	0.60	0.38
NITRATE NITROGEN	mg/l	0.56	<0.2 X	<0.05	<0.05
CYANIDE (TOTAL)	mg/l	<0.005	<0.005	<0.005	<0.005
TOTAL DISSOLVED SOLIDS	mg/l	259	129	333	185

Test Description	Units	05
		GW-6
SILVER (TOTAL)	mg/l	<0.01
ALUMINUM (TOTAL)	mg/l	1.2
BARIUM (TOTAL)	mg/l	0.03
CALCIUM (TOTAL)	mg/l	18.1
CADMIUM (TOTAL)	mg/l	<0.002
CHROMIUM (TOTAL)	mg/l	<0.01
COPPER (TOTAL)	mg/l	<0.02
IRON (TOTAL)	mg/l	1.02
POTASSIUM (TOTAL)	mg/l	<2
MAGNESIUM (TOTAL)	mg/l	10.2
MANGANESE (TOTAL)	mg/l	0.22
SODIUM (TOTAL)	mg/l	26
NICKEL (TOTAL)	mg/l	<0.02
ZINC (TOTAL)	mg/l	<0.02
MERCURY (TOTAL)	mg/l	<0.0002
ARSENIC (TOTAL)	mg/l	<0.005
LEAD (TOTAL)	mg/l	0.017

APPROVED  
DATE 4/27/91  
BY [Signature]

**Davis & Floyd, Inc.****Laboratory Analysis Report**

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Test Description	Units	05
		GW-6
SELENIUM (TOTAL)	mg/l	<0.005
TOTAL ORGANIC CARBON	mg/l	5
BICARBONATE ALKALINITY	mg/l	87.15
pH (LAB)	pH units	7.0
SULFATE	mg/l	12
SPECIFIC CONDUCTANCE	micromhos/cm	290
TEMPERATURE	Degrees C	23
AMMONIA NITROGEN	mg/l	0.19
NITRATE NITROGEN	mg/l	0.06
CYANIDE (TOTAL)	mg/l	<0.005
TOTAL DISSOLVED SOLIDS	mg/l	272

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GUALIA USA LIMITED

**DEFINITIONS AND EXPLANATIONS:**

THE " X " INDICATES A MATRIX INTERFERENCE WHICH MAY REQUIRE A DILUTION OR WHICH PREVENTS THE REPORTING OF A RESULT. DETECTION LIMITS HAVE BEEN ADJUSTED WHERE APPLICABLE.

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**WATER QUALITY ASSESSMENT  
AND ENFORCEMENT DIVISION**

816 East Durst Street, Greenwood, S.C. 29646

**Phone (803)229-5211**

**Fax (803)229-7844**

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